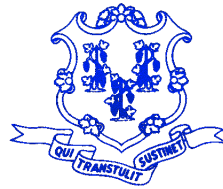


STATE *of* CONNECTICUT
OFFICE *of* MILITARY AFFAIRS
(OMA)

Annual Report 2016



Robert T. Ross
Executive Director

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I. Introduction

For its legendary support in the Revolutionary War, President George Washington called Connecticut the “*Provisions State*.” From the beginning of America’s democracy, Connecticut has played a key role in producing the diverse and highest quality human and physical resources for our nation’s defense.

Units of the Connecticut National Guard are dispersed in armories and other facilities across the state. Throughout its long history, dating back to colonial militias, Guard units have responded to state and national emergencies and performed combat operations around the world. The Connecticut National Guard is headquartered next to the State Capitol in Hartford, in the massive State Armory and Arsenal building dedicated by President William H. Taft in 1909.

In 1794, after the Continental Congress decided to create a United States Navy, an expedition sailed from New London to retrieve live oak, the hardest wood available, to build America’s first warships at different shipyards along the East Coast. These ships were not modified merchant vessels. They were designed from the keel up to be warships. One of them, the USS Constitution, remains the oldest commissioned warship in the world.

The Navy base in Groton was originally a Naval Yard and Storage Depot, established in 1868. It was built on land donated by the people of Connecticut. The State Legislature provided \$15,000 and the City of New London appropriated \$75,000 for the purchase of land on the east bank of the Thames River in the New London harbor. In 1916 the base was designated the nation’s first Naval Submarine Base and home of the Submarine School.

The first land-based campus of the Coast Guard Academy was established at Fort Trumbull in 1910 and then moved to land donated by the City of New London in 1915. The Coast Guard Academy is the single officer accession source of all commissioned officers for the U.S. Coast Guard. Today, the men and women of the Coast Guard serve at stations ashore and aboard cutters deployed throughout the U.S. and in every ocean.

Since the first days of our democracy, Connecticut’s defense manufacturing industry has continued without interruption. The ships, submarines, aircraft, jet engines, helicopters, firearms and advanced weapon systems built in Connecticut reflect our state’s continuous innovation and highly skilled workforce. Connecticut’s defense industry and military bases produce billions of dollars in economic activity throughout the state, in large and small businesses in virtually every municipality.

Overview of OMA

The Office of Military Affairs (OMA) was established by Connecticut General Statute 32-58b in 2007. Accordingly, “the Office of Military Affairs shall promote and coordinate state-wide activities that enhance the quality of life of all branches of military personnel and their families and to expand the military and homeland security presence in this state.”

Mission of OMA

- Coordinate efforts to prevent the closure or downsizing of Naval Submarine Base New London in Groton (SUBASE).
- Support Connecticut’s military families and enhance their quality of life.

- Advocate for Connecticut's defense industry, a major component of the state's economy and an engine of innovation and quality production for the U.S. Armed Forces.
- Encourage the retention of established military and defense industry missions and the relocation of new ones to the state.
- Serve as liaison to the Connecticut congressional delegation on defense and military issues.

Structure and Organization

As directed in statute, OMA is established within the Department of Economic and Community Development (DECD) for administrative purposes only. OMA and DECD are co-located at 505 Hudson Street in Hartford, Connecticut.

The office is minimally staffed with a full-time Executive Director, designated as a department head in the executive branch, reporting directly to the Office of the Governor. The Executive Director is supported by DECD staff members and interns who provide support for OMA in various functions including, but not limited to, office administration, financial management, legal counsel, information technology, economic research and legislative affairs.

The legislation setting forth duties and responsibilities of the OMA Executive Director was revised by the Connecticut General Assembly to more accurately reflect the ongoing activities of the office. The revised legislation (Appendix A) was signed into law by Governor Malloy on June 19, 2015.

The Washington, D.C.-based consulting and government relations firm, Mercury®, is retained by OMA to provide supportive services in Washington. This firm played a key role in Connecticut's successful effort to prevent the closure of the SUBASE in 2005. Under a contracted professional services agreement, Mercury® assists OMA in coordinating initiatives with the Connecticut congressional delegation, developing government and public communication strategies, monitoring and tracking trends in defense spending in the state, projecting future developments in defense and homeland security matters, monitoring significant issues related to Connecticut's defense industries, representing OMA to Pentagon policy-makers, and recommending strategies and initiatives to advance and protect the state's interests in Washington.

OMA is an active member of the national Association of Defense Communities (ADC), a Washington-based organization that represents states and communities nationwide that host military installations. OMA Executive Director Bob Ross was elected to the ADC Board of Directors for his many contributions to the organization, including participation on numerous discussion panels at national and regional forums. Working with ADC and his counterparts in Rhode Island and Massachusetts, OMA co-hosted a well-attended, successful ADC regional forum in Newport, RI, on December 21, 2016. This forum was designed to promote regional collaboration in supporting military bases, defense industries and military families in New England. It also reinforced the OMA message that New England is much more influential when acting as a region instead of individual states (see Section III, Figure 9).

II. Key Defense Issues for the Nation and State

The debate over national defense issues in 2016 took place on two broad levels.

The first dealt with governance, with the outgoing Obama Administration submitting its Fiscal Year (FY) 17 budget in February, and Congress then proceeding with its usual hearings by the Senate and House Armed Services committees and grinding out a National Defense Authorization Act (NDAA), providing funding and policy guidance. On a parallel track, the Senate and House Appropriations defense subcommittees performed similar due diligence with the goal of producing an FY17 defense appropriations bill.

The second – more in the public spotlight – was on the political level, as both presidential candidates debated and discussed defense and other national security issues and made numerous proposals to strengthen U.S. defense capabilities. National security was also an important topic in senatorial and House races nationwide.

As regards to defense issues important to Connecticut's economy and its defense industrial base, the year was a good one. Significant funding was authorized for continued production of two *Virginia*-class submarines annually, continued engineering and design work on the *Columbia*-class program involving replacement of *Ohio*-class ballistic missile submarines, continued procurement of the F-35 fighter aircraft with its Pratt & Whitney engines, and Sikorsky helicopter programs (see below).

Defense Issues on the National Stage

On the policy level, the year ended with Congress approving a fairly robust FY17 NDAA in the month of December, just before

Congress adjourned for the year. FY17 was the second straight year where budget caps imposed under the Budget Control Act of 2011 (BCA) – through a budgeting process known as “sequestration” -- were lifted for both defense and non-defense bills under legislation passed in late 2015.

However, Congress was unable to pass an FY17 appropriations bill for the Department of Defense (DOD) and most other federal agencies. As a result, the year ended with all departments except the Department of Veterans Affairs (the only regular FY17 appropriations bill passed by Congress before adjourning was for the VA and military construction) operating under a congressional “Continuing Resolution” (CR), which froze FY17 spending at FY16 levels except for certain exceptions.

While Congress worked through defense and other national security legislation, public attention was riveted on the presidential race. One of the most high profile campaign promises for candidate Donald Trump was to rebuild our military forces. He campaigned on a military expansion platform that included an active duty Army of 540,000 soldiers (currently about 480,000 and on a downward slope to 476,000), a 350-ship Navy (now 275), an Air Force with 1,200 fighter aircraft (about 1,100 now but declining), and 36 Marine Corps battalions (currently 23 infantry battalions).

Following the election, various estimates were published on the cost of implementing the Trump defense plan. The American Enterprise Institute estimated the plan would require some \$100 billion over four years, beyond the defense funding plan proposed by the Obama Administration over the same period. The Center for Strategic and International Studies estimated the buildup would cost \$80 billion over a multi-year period.

As regards to the proposed 350-ship Navy, the non-partisan Congressional Budget Office estimated the cost at \$690 billion over a 30-year period, or \$23 billion per year. This is 60 percent more than the average annual funding for shipbuilding the Navy has received in the past 30 years.

As 2016 came to an end, it was unclear how the Trump Administration would make a start toward fulfilling its robust defense buildup proposals in its first budget, for FY18. It was apparent, however, that the sequestration budget caps imposed in 2011 and scheduled to be back in force for FY 2018 – after the congressionally approved two-year reprieve for FYs 2016 and 2017 – would have to be suspended or permanently ended. This would be a formidable challenge for Congress and the Administration in 2017 since congressional deficit hawks – particularly certain House Republicans -- will almost certainly oppose unrestrained federal spending. And, Democratic leaders in both Senate and House will likely seek parity for non-defense agencies as regards to any defense spending increases. They are also sure to furiously oppose offsets in non-defense spending to balance out a big defense spending boost.

On the international scene, several issues that made headlines in 2016 are certain to continue as major challenges in the first year of the Trump Administration. Foremost among them – at least in terms of media coverage and public visibility – is cyber security and Russia's apparent hacking into U.S. political institutions in an effort to influence the outcome of the U.S. presidential election. This incident led to the public realization that cyber warfare is no longer a thing of science fiction but rather a formidable challenge to U.S. national security.

Another troubling issue in 2016 was China's continued construction and fortification of islands as part of its military expansion in the South China Sea. Many defense analysts see an increasingly assertive China as a potential threat to the United States and its allies in the Pacific, mainly Japan and South Korea.

Finally, in late 2016 and early 2017 North Korea conducted several high-profile missile tests and became progressively more belligerent in its denunciations of South Korea and the United States. There was widespread expectation among national security experts that North Korea would forcefully continue its efforts to develop nuclear weapons capability while stepping up its anti-U.S. harangues.

Base Realignment and Closure (BRAC)

For the fifth year in a row, Congress once again rejected a request by DOD for another round of military base closures, known as base realignment and closure (BRAC). The last BRAC round was in 2005, when Submarine Base New London barely escaped being shut down after landing on DOD's list of bases recommended for closure. Prior to that, BRAC rounds were held in 1988, 1991, 1993 and 1995.

However, Congress did permit DOD to conduct an analysis of excess base infrastructure capacity in 2016. That report, submitted to Congress on April 12, 2016, showed that DOD has an overall excess capacity of 22 percent. Excess capacity for the military services was as follows: Army, 33 percent; Air Force, 32 percent; Navy, 7 percent; Defense Logistics Agency, 12 percent. The study was based on FY 2019 force levels.

As has been the case in recent years, Army and Air Force officials in 2016 were forceful in their requests to Congress for another BRAC. In contrast, the Navy took the position that Navy and Marine Corps facilities were pretty much right-sized due to large installation cutbacks in prior BRAC rounds.

It remains to be seen how the BRAC issue will play out in 2017. Some defense experts feel that as a businessman, President Trump will make a forceful push for base closures as a way to cut significant DOD overhead costs. Others argue that it would make no sense to close bases when a very large force structure buildup is planned for the years ahead. The Trump Administration's BRAC preferences likely will not be known until it submits its full FY18 budget to Congress, expected in May of 2017.

State of Connecticut Issues

As stated above, Connecticut fared very well in 2016 with respect to congressional funding for its defense industrial base. This was due in large part to the unified and forceful advocacy of the Connecticut congressional delegation. Following is a summary of funding authorized for major Connecticut-related weapons programs in the FY17 NDAA:

- \$5 billion-plus for two *Virginia*-class submarines in 2017, plus advance procurement funding to sustain a two-per-year build rate in 2018 and 2019. The latter included \$85 more than the DOD budget request for the Virginia Payload Module (VPM) that will be built into *Virginia*-class submarines starting in FY19. The VPM substantially increases the ability of *Virginia*-class submarines to launch cruise missiles and deploy Special Forces and other high value payloads.

- \$1.9 billion for continued design and engineering for the new generation of ballistic missile submarines that will replace the *Ohio*-class submarines. The Navy has named the new ballistic missile submarines as the *Columbia*-class.
- \$8 billion for 63 F-35 Joint Strike Fighter aircraft across all of the military services. Connecticut-based Pratt & Whitney is sole provider of the F-35 engines.
- \$929.3 million for 36 Sikorsky Black Hawk helicopters; \$437 million for initial-year procurement of two Marine Corps heavy-lift CH-53K helicopters.

As stated above, Congress was unable to pass a FY17 defense appropriations bill during 2016. However, the Continuing Resolution passed by Congress in December that continued funding for DOD and most other agencies at FY16 levels contained two major exceptions benefitting the state's defense industrial base. The first authorized advance procurement funding for *Columbia*-class submarines in the amount of \$773.1 million; the second authorized multi-year procurement contracts for Black Hawk helicopters in order to mitigate schedule delays and cost increases.

Another positive development for Connecticut in late 2016 was the Navy's release of a Force Structure Assessment (FSA), a year-long effort to evaluate long-term security requirements for naval forces. The FSA recommended a 355-ship fleet, including 66 submarines, 12 aircraft carriers, 104 large surface combatants, 52 small surface combatants, and 38 amphibious ships. The recommendation for 66 submarines represents a significant increase from the current level of 48. "This makes the two-a-year build rate [for *Virginia*-class submarines] as we also build the *Columbia*-class SSBNs a national imperative, while also taking

advantage of every possible opportunity to add to that build rate,” said Rep. Joe Courtney of Connecticut, Ranking Member of the House Armed Services Seapower Subcommittee.

Another noteworthy achievement during 2016 was an agreement among the State of Connecticut, Lockheed Martin and Sikorsky to keep Sikorsky’s worldwide headquarters in Connecticut and produce nearly 200 new Marine Corps CH-53K heavy lift helicopters in the state through at least 2032. Lockheed Martin, the parent company of Sikorsky, agreed to retain and grow its full-time employment in the state to more than 8,000 over the term of the agreement. Also, Sikorsky will nearly double its spending with suppliers in Connecticut.

Gov. Dannel P. Malloy said the agreement “ensures that great manufacturing jobs – thousands of them – will remain in Connecticut, and that Sikorsky’s extraordinary record will continue to flourish for years and years to come, right here at home.” He also noted that the deal is “also about the supply chain companies and their employees that will benefit from the CH-53K being built by Sikorsky. These companies are in every corner of our state.” The agreement was subsequently approved by the Connecticut General Assembly.

III. Connecticut Defense Industrial Base Outlook

Connecticut’s defense industrial base remained strong in 2016 and projections for the years ahead are very good. In fact, a major challenge will be to ensure that the state’s prime contractors and their suppliers are able to provide the skilled workforce that will be needed for ramped-up defense production over the next decade.

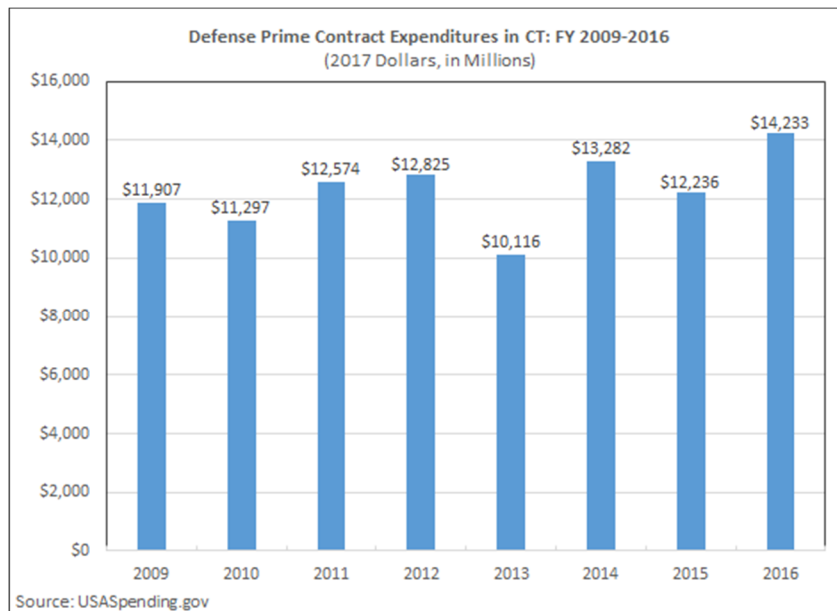
This analysis of defense spending in the state is drawn from two sources. For prior federal spending in prior years, we use the website USASpending.gov. This website tracks federal prime contracts in excess of \$25,000 actually awarded in fiscal years. It is administered by the Bureau of Fiscal Services in the Department of the Treasury

The analysis of defense spending *projections* in each state and the nation as a whole is based on data in the annual DOD publication, *Projected Defense Purchases: Detail by Industry and State*. This year’s report covers calendar years 2015 through 2021. The report is produced by the Economic and Manpower Analysis Division of the office of Cost Assessment and Program Evaluation (CAPE) at DOD. It is based on data from the Defense Employment and Purchases Projection System (DEPPS), and is thus known as the “DEPPS Report.”

It is important to know the methodology used in the DEPPS report. The projections are based on the President’s FY17 budget, which was submitted to Congress in February 2016. Since Congress invariably makes changes to hosts of budget items, the projections are not intended to be exact. Rather, the purpose is to present “big picture” estimates showing trends over the seven years covered in the report.

Also, the 2016 DEPPS report contains a significant methodology change. The estimates for years 2015 and 2016 in the report include Overseas Contingency Operations (OCO) funds. This is a DOD budget category established for wartime funding in Afghanistan and Iraq. It is not subject to the mandatory “sequestration” spending caps imposed by the Budget Control Act of 2011 (BCA). However, estimates for years 2017-2021 do *not*

include OCO funding, but rather are taken from the DOD baseline budget request. Thus, virtually all the projections contain a significant decline between years 2016 and 2017, and therefore relative comparisons in future years is more informative than degree of change from previous years.



[Figure 1]

Figure 1 depicts the values of defense prime contracts to Connecticut companies 2009-2016. As the chart shows, the amounts are fairly steady 2008-2012. These are the years following the big national security buildup starting with the 9/11 terrorist attacks in the United States in 2001, then accelerating with the 2003 invasion of Iraq. The drop-off from 2012 to 2013 is no doubt related sequestration sending caps resulting from the BCA, which went into effect for DOD and all other federal agencies on Jan. 1, 2013. The DOD spending limits were subsequently eased by

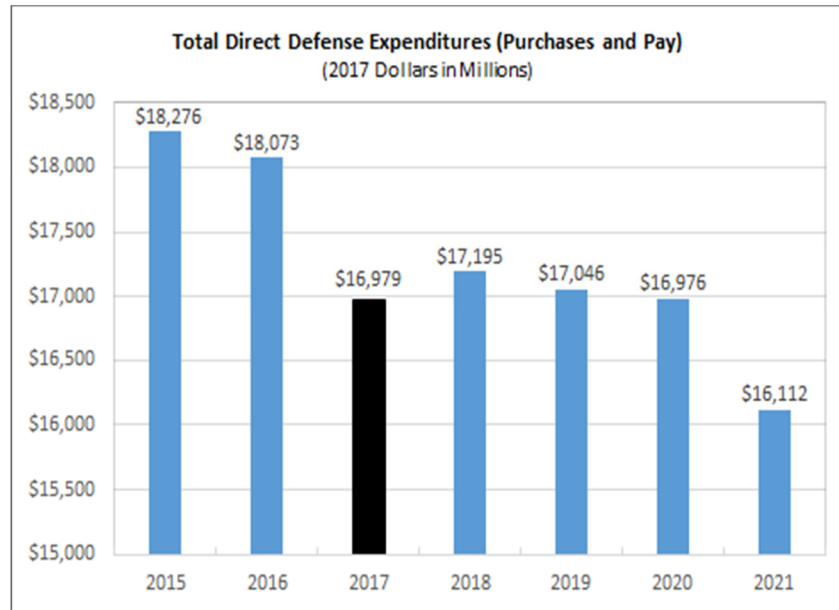
Congress for fiscal years 2014 and 2015. In late 2015 Congress took additional action to raise spending caps for both defense and non-defense bills for FY 2016 and FY 2017.

The state's big three defense contractors – General Dynamics' Electric Boat, United Technologies' Pratt & Whitney, Lockheed Martin's Sikorsky Helicopters – accounted for some \$13.3 billion of the impressive FY16 total of \$14.2 billion in defense contracts. Some of this work represented expenditures of funds from long-term contracts awarded in prior years. However, hundreds of small businesses and colleges in Connecticut received contracts in modest amounts that, taken together, totaled almost a billion dollars. For example, in FY16 the University of Connecticut received \$2.1 million via 55 defense contract actions including modifications of existing contracts. Many of the small contracts went to local companies supplying goods or services to commands at Naval Submarine Base New London.

Such small contracts represent meaningful contributions to local and regional economies within Connecticut but receive virtually no visibility. For example, the Office of Military Affairs tracks defense contracts announced daily by DOD. However, such announcements include only prime contracts with a value of \$7 million or more. Fortunately, the USASpending.gov website takes into account such small awards when calculating the defense contract totals shown in Figure 1.

Figure 2 shows projections of direct defense expenditures in Connecticut. "Direct Expenditures" means contracts for goods or services, plus military and civilian pay. The state is projected to drop significantly from 2016 to 2017, then recover and keep a steady path until another decline in 2021. The 2016-2017 decrease is almost certainly the result of the DEPPS report methodology

change referenced above, with 2016 amounts including OCO funds in the DOD budget for that year and 2017 amounts not including OCO budgeted funds.

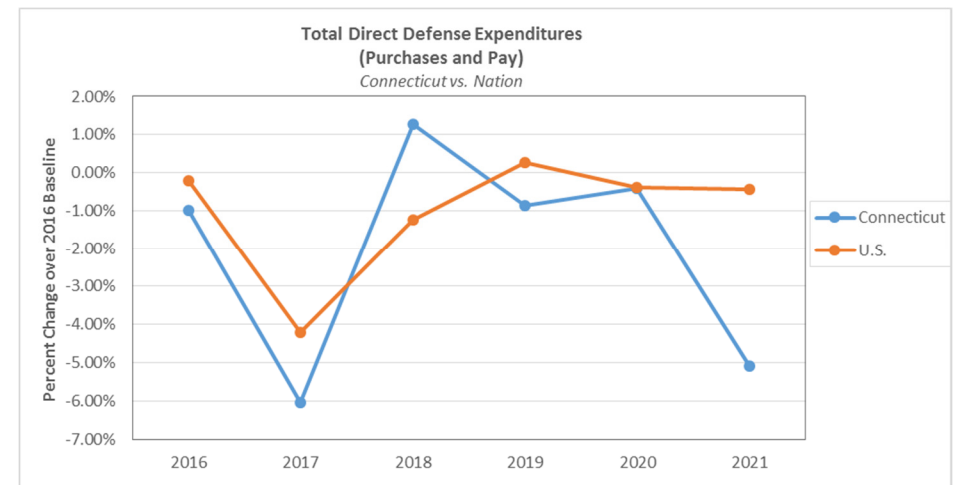


[Figure 2]

The dip from 2020 to 2021 is harder to explain. It may reflect the fact that DOD’s FY17 budget submission to Congress did not project funding for a second *Virginia*-class submarine in 2021. Current long-range DOD planning calls for *Virginia*-class production to drop from the current two-per-year schedule to only one in 2021, the first year of projected construction on the new *Columbia*-class of ballistic missile submarines. Including construction of a second *Virginia*-class sub in 2021 – favored by many in Congress – would mean a DOD budget restoration of significant funds for that year, much of which would flow to Connecticut’s Electric Boat. So the 2021 projection can be expected to change in the near-term future.

Figure 3 shows how Connecticut compares to the nation as a whole in direct expenditures for purchases and pay, starting with a 2016 baseline. Again, the plunge from 2016 to 2017 reflects the DEPPS OCO methodology change. Connecticut fares better than the national average with the 2018 defense spending projections. Then, for unexplained reasons, tapers off a bit in 2019 and sinks in 2021. As explained in the paragraph above, the state’s drop below the national trend from 2020 to 2021 could be related to long-term projections of funding for submarine production, which can be expected to change in Connecticut’s favor in the next several years.

While it’s helpful to show the projected trend of Connecticut’s defense contracting and other revenues in the years ahead, the “direct expenditures” category does not fully depict the health of the state’s defense industrial base compared to other states. Table 1 below lists the top 10 states in the DEPPS report’s estimates of direct expenditures (purchases and pay) for 2017.



[Figure 3]

State	Total Direct Expenditures (Purchases/Pay), 2017 (Millions)
-------	---

1. Virginia	63,452
2. California	62,759
3. Texas	49,299
4. Florida	26,997
5. Maryland	25,152
6. Georgia	19,292
7. Alabama	17,059
8. Connecticut	16,979
9. Massachusetts	16,599
10. Pennsylvania	16,183

[Table 1]

Connecticut is ranked 8th, just behind Alabama; in last year's report it was ranked 9th. However, since this category includes the pay component, it favors states with many large military bases that in addition to tens of thousands of military personnel employ many thousands of civilians. The fact that Connecticut ranks so high is a tribute to its robust defense industrial base.

Connecticut's prowess in supplying the military services with submarines, jet engines, helicopters and other goods, and services – high-end design and engineering – is better captured in Table 2 below. This is based on the DEPPS report's estimates of direct purchases from procurement and research, development, testing and engineering in 2017, *excluding pay to military and civilian personnel*.

State	Direct Purchases from Procurement/RDTE, 2017 (Millions)
-------	--

1. California	23,215
2. Virginia	18,810
3. Texas	16,536
4. Connecticut	14,587
5. Massachusetts	11,542
6. Maryland	8,194
7. Alabama	6,386
8. Arizona	6,306
9. Florida	5,517
10. Pennsylvania	5,109

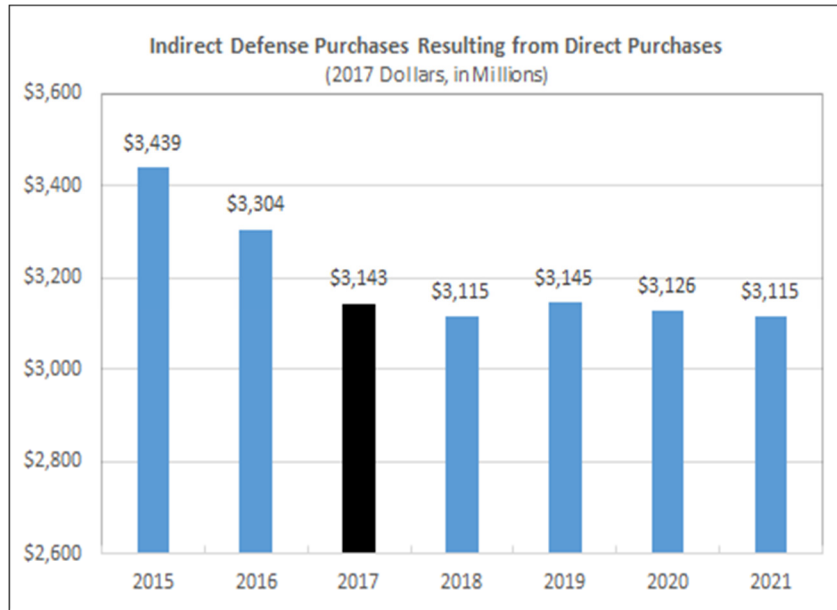
[Table 2]

Here, Connecticut is ranked 4th, behind only the giant defense contracting states of California, Virginia and Texas. As the figures show, Connecticut is truly a national power in provisioning the nation's military forces, true to the distinction it gained in the Revolutionary War for being the main source of weapons and ammunition for the Continental Army!

Another DOD measurement of the economic impact of defense spending is "indirect" defense purchases resulting from direct purchases. These are purchases made across the supply chain for the final product. For example, there are hundreds of suppliers in Connecticut that provide items to Electric Boat required for the production of a single *Virginia*-class submarine. And this economic ripple effect is also a characteristic of major aerospace products from Sikorsky and Pratt & Whitney.

Figure 4 shows projections for indirect purchases for Connecticut. Again, the decrease from 2015/2016 to 2017 is

explained by the change in the DEPPS methodology not including OCO funding in for 2017 and beyond. Connecticut remains stable in this category in the years beyond 2017 -- not surprising due to the vital importance of strong supply chains required for the production of nuclear submarines, military jet engines and helicopters.

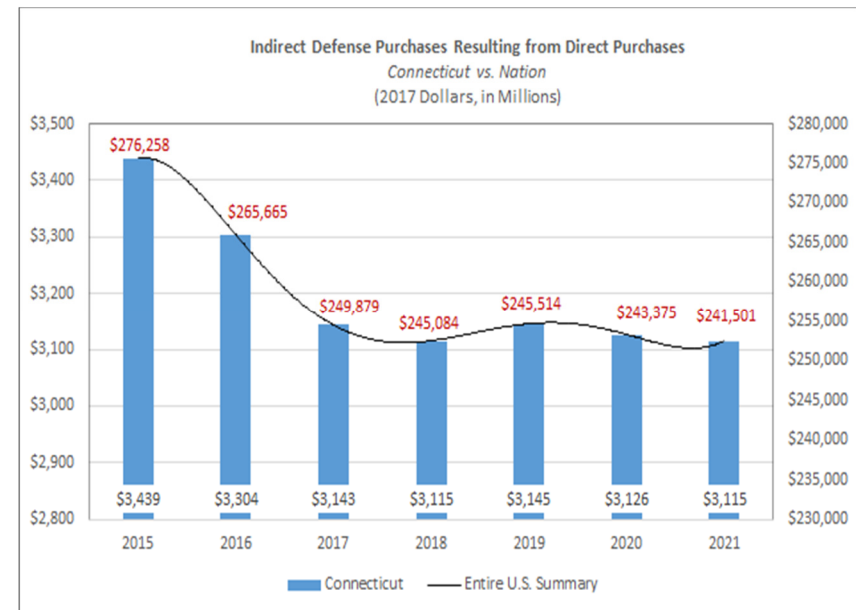


[Figure 4]

Interestingly, as depicted in Figure 5, Connecticut's steady state in indirect defense purchases from 2017 onward is virtually identical to projections for the nation as a whole, but with slightly less of a dip in Connecticut from 2016 to 2017.

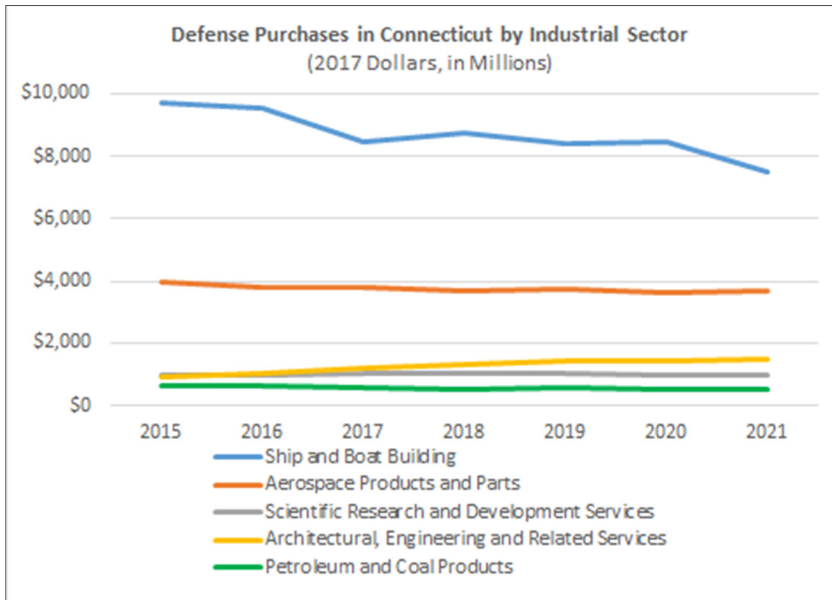
Figure 6 illustrates the projections of defense purchasing in the state by industrial sector. It's no surprise that shipbuilding, indicated by the blue line, is the leading sector by far and will continue to be. This is followed by aerospace products – jet

engines, helicopters – with engineering and design services in third place. The latter reflects the extremely large amount of engineering work required for highly complex weapons programs such as the *Columbia*-class of nuclear ballistic missile submarines.

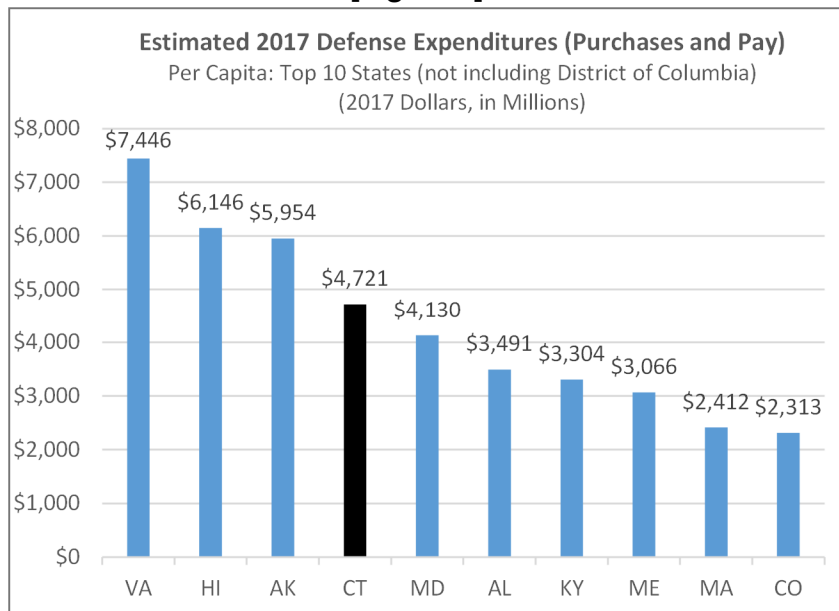


[Figure 5]

Another -- and important -- way of gauging the relative strength of the Connecticut's defense industrial base compared to other states and regions is by *per capita* calculations, which are done in DOD's DEPPS report. Figure 7 shows the top 10 states ranked on a *per capita* basis for estimated direct defense expenditures in 2017, including both purchases and pay. Connecticut is ranked 4th. Virginia with its many military bases and defense contractors is 1st while Hawaii and Alaska with their tiny populations are ranked 2nd and 3rd, respectively.

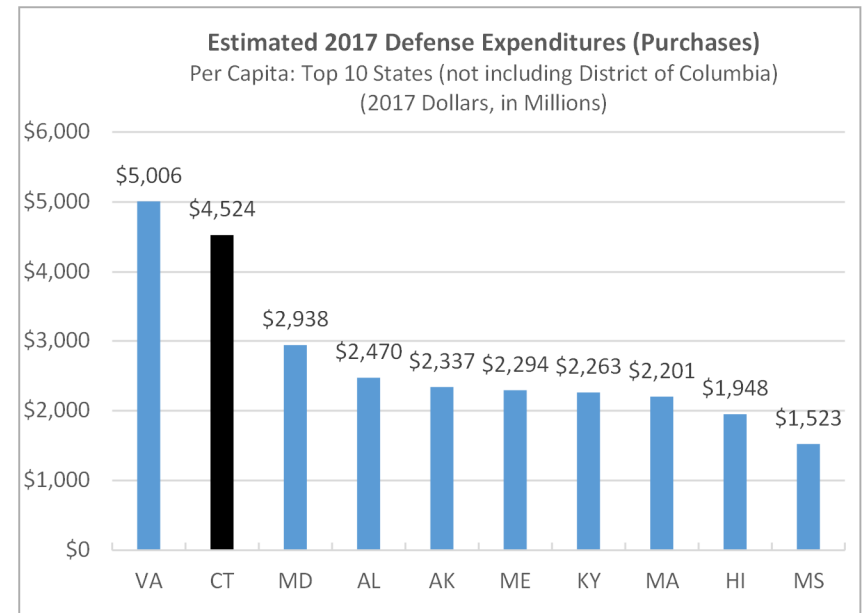


[Figure 6]



[Figure 7]

But what happens if we look only at *per capita* defense contracting, excluding pay? As shown in Figure 8, Connecticut zooms up to 2nd place, behind only Virginia. Hawaii and Alaska, with fairly large military and civilian employee populations, drop down in the list. This ranking is additional testimony to the vitality of Connecticut's defense industrial base. To use a boxing metaphor, the state punches far above its weight when it comes to providing 21st Century weaponry to our military forces.



[Figure 8]

Finally, the DEPPS report also measures 2017 estimated direct defense purchases by *region*, both outright and on a *per capita* basis. On the sheer purchasing and pay amounts alone, i.e., not *per capita*, the South Atlantic region -- including Virginia, Florida, Maryland and Georgia with their many military bases and defense contractors -- is far and away the leader, with \$169 billion in

projected DOD expenditures. The Pacific region is 2nd at \$94.8 billion, mainly due to California. New England is far down in 7th place, at \$42.2 billion. However, the *per capita* calculations tell a different story, as shown in Figure 9. Led by Connecticut, New England tops the regional list at \$2.8 billion, followed by the South Atlantic's \$2.6 billion. So while New England only has one operational naval base – Naval Submarine Base New London – and relatively small populations, it continues to support the nation's defense in a robust manner true to its Revolutionary War roots.

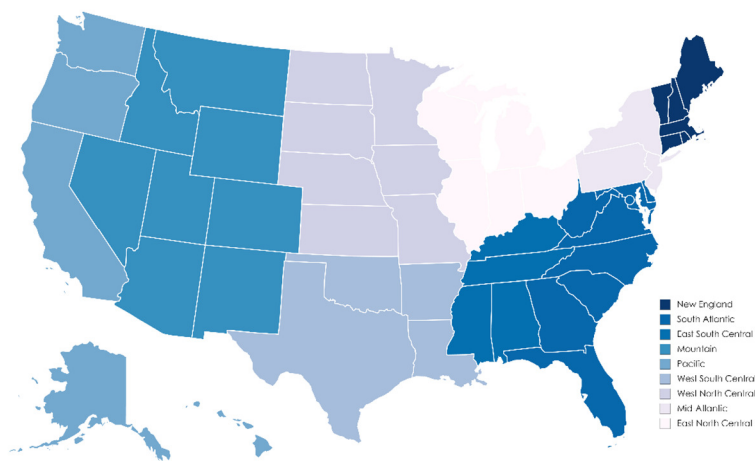


Figure 9: Direct Defense Spending, Per Capita by Regions
(Darker indicates higher per capita spending; lighter indicates lower per capita spending)

Summary

As shown above, there are many ways to demonstrate the strength of a state or region's defense industrial base, now and in the years ahead. For Connecticut, all assessments point to a vibrant and highly productive defense economy, providing weapons

systems critical to our national security. This will continue to be the case in the immediate years ahead and well into the 21st Century, particularly as production on the new *Columbia*-class ballistic missile submarines ramps up in the 2020s and aerospace innovations in jet propulsion and rotary wing aircraft continue to come from Connecticut.

Estimated Defense Expenditures Per Capita, 2017 (By Region, in 2017 dollars)	
Region	Total
New England	2,849
South Atlantic	2,618
East South Central	2,367
Mountain	1,804
Pacific	1,773
West South Central	1,617
West North Central	1,463
Mid-Atlantic	1,025
East North Central	832

IV. U.S. Naval Submarine Base New London and the Submarine Industrial Base

Chief among the reasons to create OMA was the very real probability that the SUBASE in Groton would be closed. Twice it was targeted by the DOD for closure in the BRAC process. Twice, *Team Connecticut*, a group of public and private sector individuals, got organized and worked tirelessly to reverse the almost certain closure of the base. Today, the primary task of OMA is to do proactively what *Team Connecticut* had to do reactively in the BRAC rounds of 1993 and 2005. We don't want to wage this battle again.

The predictable economic catastrophe associated with the potential closure of the SUBASE is obvious to anyone familiar with southeastern Connecticut. The loss of the positive effects we realize from the base as it generates over \$5 billion in annual economic impact and over 30,000 jobs would be devastating. The ripple effect throughout the state would simply be the reverse of what we experience today. Hundreds of small businesses deriving their business and clientele from the base would go under. Without this economic anchor, the regional economy would be severely impacted, in every industry cluster.

Creating Military Value

It is clear that another BRAC round will eventually be approved by Congress. Subject matter experts widely believe DOD will continue requesting another BRAC round every year until one is approved. OMA efforts will continue to focus on developing and executing strategic initiatives to enhance the *military value* of the base in preparation for the next BRAC round when it comes.

In 2007, the Connecticut General Assembly authorized \$40 million for investments in *military value* at the SUBASE to protect it from closure. Since then, funding has been directed to several carefully selected projects. This strategy is built on the criteria used by prior BRAC Commissions and aims to assess and enhance the *military value* of the base, thereby decreasing the likelihood it would be targeted for closure. By increasing *military value* in operations, infrastructure and efficiency, we reduce the likelihood of closure because DOD simply can't afford to recreate that capacity anywhere else. It's not about sunk cost. It's about current and future *military value*.

Today the SUBASE is undergoing a remarkable transformation as old infrastructure is demolished and replaced with modern capacity. People familiar with the SUBASE recognize its ongoing dramatic transformation into a modern campus of new buildings specifically designed for unique operations, specialized training and high-tech support functions associated with producing and maintaining our nation's submarine force.

Working in a close partnership with Navy officials in Connecticut and at the Pentagon, OMA established a legal framework through which the state can transfer funds to the Navy for carefully selected projects at the SUBASE.

In March 2012, Governor Malloy met with former Secretary of the Navy Ray Mabus in his Pentagon office to discuss the SUBASE. The Governor confirmed that the state will continue its unprecedented partnership with the Navy to transform the base and support service members and their families.

Previous state-funded projects have included construction of new buildings to support operations and maintenance, construction of training equipment, construction of a new high efficiency boiler for base-wide steam utilities, and purchases of land for encroachment mitigation on both the northern and southern perimeters of the base. Collectively, these projects represent a wholly unique partnership with the Navy in diverse and creative areas of base improvements.

In 2015, the State Bond Commission authorized OMA to provide funding to the Navy for early planning of a microgrid to be developed on the base. This microgrid will provide energy security

for base operations and potentially reduce the operating cost of the base by incorporating clean cogeneration capacity and highly efficient power controls and distribution systems. Governor Malloy again met with Navy Secretary Mabus to enlist the Navy's staff expertise in the project and to discuss creative methods for private sector funding in a future long-term power purchase agreement. Secretary Mabus agreed to provide his authority and staff expertise to this project and sent delegations to meet with state and local officials at the SUBASE.



In this Dec. 3, 2015, photo, Dennis McGinn, left, Assistant Secretary of the Navy for Installations, and Bob Ross, Executive Director of Connecticut's Office of Military Affairs, participate in a ceremony where McGinn was presented with an offer of \$2.2 million for two more projects for infrastructure improvements at Naval Submarine Base New London in Groton, CT. AP Photo/Jennifer McDermott

As important as these ongoing state-funded investments are, they represent only a small fraction of the military construction projects underway on the base. Since 2005, there have been over

\$300 million worth of planning, demolition and construction projects on the base, with about \$14 million funded by the state. So, the state is an important but modest partner in a much larger effort to modernize the base.

September 21, 2015, marked an important development for the SUBASE as a new command was established. Commander, Naval Undersea Warfighting Development Center (NUWDC), marked the return of a flag officer to the base. This new command has global responsibilities for the submarine force and further enhances the role of Groton as the Navy's center of excellence in all submarine activities from design, to construction, maintenance, operations and tactical evolution.

OMA will continue to work closely with our congressional delegation, state and local officials, regional stakeholders and Navy leadership to identify future projects and missions as part of our ongoing strategy to enhance the *military value* of the base and protect it from closure in a future BRAC round.

Connecticut's Submarine Industrial Base

Central to the argument *Team Connecticut* advanced in the 2005 BRAC was that the SUBASE was not given adequate credit for the *unparalleled synergy* created in the close proximity and interactions among so many public and private submarine defense industry and military organizations.

Submarines are designed and built at Electric Boat in Groton. All submarine personnel receive basic and advanced training at the Naval Submarine School on SUBASE. Tactics are

developed by the newly established Naval Undersea Warfighting Development Center. The Naval Undersea Warfare Center in nearby Newport, RI, conducts research and development activities in Rhode Island and on the SUBASE. The Naval Undersea Medical Research Labs are located on the base. And the base is home to the Naval Submarine Force Library and Museum and the Historic Ship Nautilus. This is the Submarine Capital of the World, where the nation's submarine force history and heritage is archived and commemorated. These organizations, and many others, coalesce to create a Submarine Force Center of Excellence – the center of gravity for nation's military undersea profession. Or as a University of Connecticut professor recently characterized this cluster “the Silicon Valley of the undersea world.”

Understanding the value of this synergy led the state also to enter into assistance agreements with EB as the nation's premier manufacturer of undersea platforms and technologies. In 2007 the State helped EB refurbish dry docks in its Groton shipyard. The state's \$9.9 million investment helped EB complete a \$65 million renovation project that helped keep submarines in Connecticut and brought other business to the region. From 2008 through 2016, EB has generated over \$1.3B in sales and paid over \$400M in wages related to submarine work performed in these dry docks. That work includes overhaul, repair, maintenance, modernization and post shakedown availability. These depot-level facilities, in close proximity to the SUBASE, are also a positive consideration that a future BRAC Commission will take into account when assessing the total *military value* of the SUBASE.

Subsequently, the state granted EB \$15M to help purchase the former Pfizer headquarters buildings and campus in New

London. This major expansion has given EB the space needed for its work in designing the new *Columbia-class* replacement for the aging *Ohio-class* strategic ballistic missile submarines (SSBN). This project has brought over 1,000 engineers to southeastern Connecticut. The building also accommodates a workforce to produce ongoing technology upgrades for the *Virginia-class* submarines. This facility is already reaching its capacity as new employees are being added to the industrial base in New London.

In October 2014 Governor Malloy announced an agreement with EB to help finance the company's expansion in Groton. Under the terms of this agreement, the Department of Economic and Community Development provided a \$10 million grant to EB in support of this \$31.5 million project that will add or protect 8,900 jobs.

While investments in our submarine industrial base are concentrated in southeastern Connecticut, the impacts are state-wide. For example, in the *Virginia-class* program, over 600 suppliers are dispersed in all five of the state's congressional districts, with the largest concentration in central Connecticut's 1st District. All together, they supply over \$600 million worth of goods and services in this defense acquisition program alone. As we seek to maintain production of *Virginia-class* submarines at two or more per year, the positive impacts on our state economy will be pervasive for decades to come.

V. The National Coast Guard Museum

The United States Coast Guard (USCG) is the only military service that does not have a national museum. On April 5, 2013, after a decade of false starts and failed attempts, the Commandant of the Coast Guard announced the decision to build a National Coast Guard Museum (NCGM) in downtown New London. The National Coast Guard Museum Association (NCGMA), a non-profit organization chartered to build the museum, has proposed a 72,000 square foot state-of-the-art building at the head of New London City Pier. It will be adjacent to the Union Station, the Greyhound bus station and Cross Sound Ferry landings. Governor Malloy participated in the announcement and committed up to \$20 million in state funding to build a pedestrian bridge to connect the museum with all elements of New London's multi-modal transportation hub.

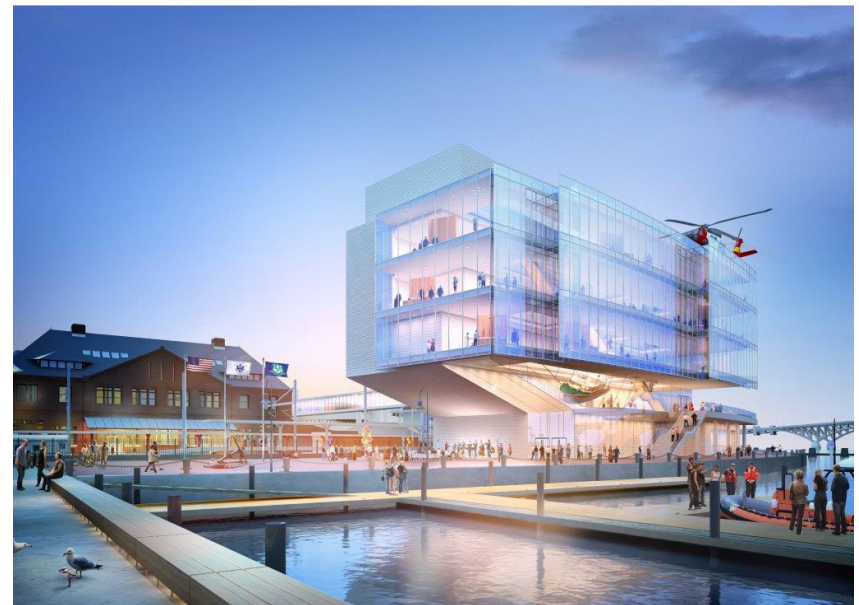
The Governor directed all state agencies to collaborate in this undertaking and to help the USCG and City of New London advance the project. He also directed the OMA to coordinate the efforts of state agencies on his behalf.

Negotiations with stakeholders advanced swiftly. The State Bond Commission approved \$500,000 for advance engineering and design of the pedestrian bridge and authorized the DECD to enter into an assistance agreement with the NCGMA. The State of Connecticut, City of New London, USCG and NCGMA negotiated a Memorandum of Agreement to clearly define roles and responsibilities in this partnership to build the museum.

State agencies worked closely with project stakeholders to complete the Environmental Impact Evaluation (EIE) as required by

the Connecticut Environmental Protection Act. The EIE authorized detailed engineering and design to proceed on the pedestrian bridge portion of the project.

Much of the financing for the \$100 million museum will be raised in a national fundraising campaign coordinated by the NCGMA. Contingent upon this fundraising effort and a series of prerequisite agreements with area stakeholders, construction could begin as early as 2020.



Artist rendering of the proposed National Coast Guard Museum to be built in New London, CT. Rendering courtesy of Payette®

Related to the National Coast Guard Museum project is the Thames River Heritage Park (TRHP) designation for the New London Harbor. Centuries of American maritime history at sites along the shores of the Thames River will be connected by a water taxi service. The TRHP Foundation obtained two surplus 40-foot USN

liberty launches to provide this service and become part of the maritime heritage exhibit. The OMA Executive Director serves on the TRHP Foundation Board of Directors and worked with local officials to obtain the authentic Navy boats which provide waterborne access to Thames River historic sites, to eventually include the Submarine Force Museum and future National Coast Guard Museum.



Two 40-foot surplus U.S. Navy liberty launches arrive in New London Monday, Nov. 30, 2015. The two boats were placed into service to connect various destinations of the Thames River Heritage Park in the summer of 2016. (Photo by: Marian Galbraith)

VI. Quality of Life and Military Service in Connecticut

Advocating for service members and their families has become one of the most important roles of OMA. Military families stationed in Connecticut for duty assignments and training enjoy supportive local communities, excellent public schools and the unique experience of living in New England. As families in transition, they occasionally need reasonable accommodations and

OMA actively engages state agencies and local organizations on their behalf.

OMA worked with regional leaders at LEARN (a regional educational service center), and the Military Superintendent's Liaison Committee to make charter and magnet schools available to military families. The DOD tends to transfer families in the summer months to avoid moves during the school year. However, the unintended consequence of this policy is that newly arriving military families often can't establish residency in time to compete in the drawing/lottery for seats in charter and magnet schools. Area superintendents implemented a program to hold back a number of seats to be made available to highly mobile families when they arrive later in the summer months. This benefits military families, giving them a level playing field to compete for seats in these unique educational programs.

The State of Connecticut is an active member of the Interstate Compact on Educational Opportunity for Military Children. This national organization recognizes the unique challenges military children face as members of families in transition. Making reasonable accommodations for these children in matters such as immunizations, physicals, administrative and academic documentation reduces the stress and challenges associated with the many relocations imposed on military families.

The OMA Executive Director served on the outreach steering committee for the Military Child Education Coalition in Connecticut. This organization facilitates training and awareness of teachers, healthcare providers and other community leaders to the unique challenges faced by children in military families. Deployments, relocations, separations and disabilities all take a toll

on children and through awareness and training we enable communities to better recognize and respond to these issues.

OMA contributed significant time and resources to help the Town of East Lyme and the Connecticut National Guard complete a DOD funded Joint Land Use Study to identify compatibility issues that arise from training operations in proximity to current and future municipal development. This study will guide the Town planners in preventing encroachment and protect the shared benefits of having two major National Guard bases in their jurisdiction.



Members of the 68W Healthcare Specialist MOS Transition Course medically evacuate a patient during a simulated field training exercise at Stones Ranch Military Reservation in East Lyme, Conn., Aug. 11. The exercise was one of the culminating events of the eight-week course hosted by the 169th Regiment (Regional Training Institute) at Camp Niantic and SRMR. Upon completion, the 17 graduates became qualified medics for the National Guard and U.S. Army Reserve. (Photo by Allison L. Joanis, State Public Affairs Office)

A similar JLUS has been initiated with the municipalities surrounding the Subase in Groton.

Working with the Eastern Connecticut Chamber of Commerce, annual Military Appreciation events have been established in southeastern Connecticut to honor service members from all branches of the military. These venues offer excellent opportunities to showcase the supportive relationships and professional partnerships established between the state and our military communities. OMA has been closely involved with these initiatives.

In partnership with the Chamber of Commerce of Eastern Connecticut, the Navy, the Coast Guard, and the National Guard, OMA orchestrated the fifth annual Military Orientation Day to expose future community leaders to all of the military branches in eastern Connecticut. The day includes an orientation at the SUBASE, a tour of a nuclear-powered submarine, a tour of the USCG Academy or Station New London, and visits to several National Guard facilities throughout southeastern CT. Weather permitting, air transportation is provided by National Guard Black Hawk helicopters, ground transportation is donated by a local livery service, and waterborne transportation by the USCG. This program is designed to educate future community leaders on Connecticut based military's missions, ongoing operations, economic impacts, and civic contributions to the region. These future leaders can in turn inform other people within their spheres of influence.

The OMA Executive Director continues to serve as a founding board member of the Southeastern CT Cultural Coalition. This newly formed non-profit advocates for the entertainment, arts and cultural sectors of the region's economy. Military art, history and performance units have played an instrumental role in the region, and having the military represented on the board of

directors reflects an appreciation of how the military is so ingrained in the social, civic and economic landscape of Connecticut.



160801-O-N0101-110 GROTON, Conn. (Aug. 1, 2016) The future Virginia-class attack submarine USS Illinois (SSN 786) conducts sea trials. Illinois is a flexible, multi-mission platform designed to carry out the seven core competencies of the submarine force: anti-submarine warfare; anti-surface warfare; delivery of special operations forces; strike warfare; irregular warfare; intelligence, surveillance and reconnaissance; and mine warfare. (U.S. Navy photo courtesy of General Dynamics Electric Boat/Released)

Recognizing a major historic milestone, Governor Malloy declared the period of October 2015 to October 2016, **Connecticut's Submarine Century**, celebrating the 100th anniversary of the nation's first submarine base and the establishment of the Submarine School. The first Navy submarines arrived October 18, 1915, and over the years created the iconic image people have observed for a century. Submarine Base New London, the

submarine capital of the world, was officially established on June 21, 1916, when U.S. Navy Commander Yeates Stirling assumed command of the Submarine Base, Submarine Flotilla, and the Submarine School in the harbor of New London on the Groton shore.

From that date forward, all crewmembers and officers of the submarine force received their basic training at Connecticut's SUBASE. Submarine Base New London is the professional birthplace of all USN submariners and in this way is connected to all of the nation's submarine history. For the last century, no matter where undersea history was made, it began in Connecticut.



VII. Conclusion

Connecticut's Office of Military Affairs demonstrates an efficient model for achieving tangible strategic outcomes. Since it was established, the office has produced a partnership with the Navy that is unprecedented in the United States. The SUBASE is now in a much better position to withstand another round of BRAC. The Connecticut National Guard and U.S. Coast Guard Academy are realizing and planning for expansions with new facilities to support their missions. The state and City of New London are looking forward to being the home of the NCGM. OMA has helped coordinate consistent and sustained support for increases in

defense and military economic impacts within the state. Most importantly, OMA has advanced the *quality of life* and *quality of service* for service members and their families stationed here and deploying to destinations around the world.

The state's diversified defense industries continue to thrive. Connecticut defense industries are thriving due to the high quality and strategic relevance of the products designed and manufactured throughout the state. Our defense industries enjoy superb reputations for their highly skilled workforces, outstanding management and efficient business practices.

Residents should be proud of Connecticut's long history as the *Provisions State*. It is a foundational part of our character, embedded in the economic fabric of our state and a legacy that should be carefully protected. The Office of Military Affairs will continue to seek opportunities to enhance the military and defense industry presence in Connecticut and advocate for the many organizations and people in our state - particularly military members and their families - who serve and support our nation's defense.



Robert T. Ross
Executive Director

Questions or comments concerning this report should be directed to the OMA Executive Director, at (860) 270-8074 or to bob.ross@ct.gov.

Appendix A: Public Act No. 15-65

Connecticut General Assembly
House Bill No. 6833
Public Act No. 15-65

AN ACT CONCERNING THE QUALIFICATIONS AND DUTIES OF THE EXECUTIVE DIRECTOR OF THE OFFICE OF MILITARY AFFAIRS.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. Subsection (b) of section 32-58b of the general statutes is repealed and the following is substituted in lieu thereof (Effective October 1, 2015):

(b) The Governor, in consultation with the Commissioner of Economic and Community Development, shall appoint an executive director to manage the daily activities and duties of the Office of Military Affairs. The executive director shall have the necessary qualifications to perform the duties of said office, including, but not limited to, having prior military experience, and having attained the rank of a field grade or senior officer within a branch of the armed forces. The Governor shall give preference to any person with the necessary training and experience who has served in the Navy or who has knowledge or prior experience with the federal Base Realignment and Closure or "BRAC" process. Within available appropriations, the executive director shall: (1) Appoint, employ and remove such assistants, employees and personnel as deemed necessary for the efficient and effective administration of the activities of the office; (2) coordinate state and local efforts to prevent the closure or downsizing of Connecticut military facilities, particularly United States Naval Submarine Base-New London, located in Groton; (3) maximize the state's input into the federal Base Realignment and Closure or "BRAC" process, including, but not limited to, (A) acting as liaison to the state's congressional delegation on defense, military and BRAC issues, and (B) coordinating the activities of consultants hired by the state to assist in monitoring activities related to BRAC; (4) encourage the relocation of military missions to the state; (5) coordinate state and local efforts to enhance the quality of life of all branches of military personnel stationed in or deploying from Connecticut and their families living or working in Connecticut; (6) review and make recommendations for state policies that affect Connecticut's military facilities and defense and homeland security industries; (7) coordinate state, regional and local efforts to encourage the growth of Connecticut's defense and homeland security industry; (8) serve as an advocate for service members and their families to other state agencies; (9) initiate and sustain collaborative partnerships with local military commanders; (10) consult with the Department of Economic and Community Development on proposed financial assistance agreements with defense and homeland security firms; and (11) prepare and submit a report of activities, findings and recommendations annually to the Governor and the joint standing committees of the General Assembly having cognizance of matters relating to commerce and public safety, in accordance with the provisions of section 11-4a.

Approved June 19, 2015

Appendix B: Biography of OMA Executive Director



ROBERT T. ROSS

Bob Ross is Executive Director of the Connecticut Office of Military Affairs. He was originally appointed by Governor M. Jodi Rell in July 2009 and reappointed twice by Governor Dannel P. Malloy. He serves as an advisor to the Governor and legislature on defense industry issues and is the primary liaison to the Connecticut congressional delegation on military and defense matters. He is responsible for coordinating state-wide efforts to protect Connecticut military bases and facilities from closure in future Base Realignment and Closure (BRAC) rounds. He also represents the state in local efforts to enhance the quality of life for service members and military families residing in or deploying from Connecticut.

He is a retired naval officer who piloted aircraft carriers and guided missile cruisers before directing public affairs for the U.S. Sixth Fleet, encompassing naval operations ashore and at sea in the Mediterranean, European and North African areas of responsibility. He also served as a spokesman at the Pentagon and coordinated media operations and community relations for the U.S. Atlantic Fleet.

He holds an M.A. in National Security and Strategy from the U.S. Naval War College in Newport, RI, and an M.A. in Public Policy and Administration from the University of Connecticut. As a former City Administrator for the City of Cripple Creek, Colorado, and former First Selectman (Mayor) of the Town of Salem, Connecticut, he has decades of experience in federal, state and municipal government. He was selected by the national Association of Defense Communities as the 2014 Member of the Year for leadership and commitment and currently serves as a member of their Board of Directors. He is a Trustee of the Chamber of Commerce of Eastern Connecticut and former Commissioner on the Connecticut Maritime Commission. He's a former Adjunct Professor of Public Policy in the UCONN Graduate School and is a recipient of the UCONN Department of Public Policy Distinguished Alumni award for continued commitment and excellence in public administration.

Appendix C: Connecticut's Submarine Century Designation



Dannel P. Malloy
GOVERNOR
STATE OF CONNECTICUT

September 17, 2015

The Honorable Raymond Mabus, Jr.
Secretary of the Navy
1000 Navy Pentagon
Washington, D.C. 20350-1000

Dear Secretary Mabus,

On behalf of the citizens of the State of Connecticut I request your support as I designate October 2015 through October 2016 a year-long celebration of *Connecticut's Submarine Century*. Over this year, we will commemorate the centennial anniversary of our Submarine Base and Submarine School, which along with Electric Boat and the host community of Groton, we collectively and affectionately call the *Submarine Capital of the World*.

The initial Navy installation established along the eastern shore of the Thames River in Connecticut was a result of the generosity and efforts of the State and its citizens, who conveyed some 86 acres to the Navy in 1868. But it was not until 1915 that the installation, then a Navy Yard, took on historic prominence. October 18, 1915, marked the arrival of submarines G-1, G-2, and G-4 under the care of the tender USS OZARK. And on June 21, 1916, the Navy Yard changed forever as Commander Yeates Stirling assumed command of the newly designated Submarine Base, the newly established Submarine School, and the New London Submarine Flotilla.

Connecticut was the perfect location for our Nation's first submarine base in 1916. The Lake Torpedo Boat Company in Bridgeport, founded by Simon Lake, and the Electric Boat Company in Groton, founded by Isaac Rice and inventor John Holland, were the foremost submarine manufacturers of the time. As you are well aware, Electric Boat continues to build the most advanced and capable submarines in the world.

Since the founding of the Submarine School, Submarine Base New London has produced all of the talented and courageous military professionals in our submarine force. It is the professional birthplace of every officer and crewmember in the Navy's undersea profession. In this way, the storied history of the Navy's submarine force is directly connected to the State of Connecticut. And that history and heritage is archived at the Submarine Force Library and Museum in Groton.

To highlight the centennial of Naval Submarine Base New London and the Naval Submarine School, and to celebrate Connecticut's submarine heritage, I invite you and the Navy to promote and participate in our year-long observance of *Connecticut's Submarine Century*.

210 CAPITOL AVENUE, HARTFORD, CONNECTICUT 06106
TEL (860) 566-4840 • FAX (860) 524-7396 • www.governor.ct.gov
governor.malloy@ct.gov

Community leaders and stakeholders in Southeastern Connecticut are working with Navy representatives to create and expand opportunities for Navy leadership and citizens alike to commemorate this historic milestone for the Navy and the nation. We would welcome additional Navy outreach efforts to raise awareness of the Navy's compelling history in Southeastern Connecticut.

Bob Ross, Executive Director of the Connecticut Office of Military Affairs, will be coordinating state agency support for this high visibility project. He will work with local communities and representatives of the Navy to assist in their planning and coordination. Your staff may contact Mr. Ross at (860) 270-8074.

On behalf of the people of Connecticut, I commend the men and women of the world's greatest Navy and its submarine force. I thank you for your superb leadership of our Navy. And I look forward to your support as we celebrate *Connecticut's Submarine Century*.

Sincerely,

Dannel P. Malloy
Governor

Cc: U.S. Senator Richard Blumenthal
U.S. Senator Christopher Murphy
U.S. Representative Joseph Courtney
CT State Senator Andrew Maynard
CT State Senator Paul Formica
Mayor Marian Galbraith, City of Groton
Mayor Rita Schmidt, Town of Groton
Mayor John Rodolico, Town of Ledyard
Mayor Daryl Finizio, City of New London
Commissioner Catherine Smith, CT Economic and Community Development
Executive Director Bob Ross, CT Office of Military Affairs
Executive Director James Butler, Southeastern CT Council of Governments
Captain Carl Lahti, USN, Commanding Officer, Submarine Base New London